What is claimed is:

1. A method for providing improved reliability in an aircraft door flight lock actuator comprising:

storing energy in a mechanical energy storage means and an electrical energy storage means;

powering the actuator using the energy stored in the mechanical energy storage means and the electrical energy storage means to complete an unlocking stroke in the absence of aircraft power; and

controlling a linear velocity of the actuator.

2. The method defined in claim 1, wherein storing energy in the mechanical energy storage means comprises deforming a compression coil spring during a powered locking stroke of the actuator.

3. The method defined in claim 1, wherein storing energy in the electrical energy storage means comprises charging at least one capacitor during a powered locking stroke of the actuator, and during a subsequent powered stall of the actuator.

4. The method defined in claim 1, wherein storing energy in the electrical energy storage means comprises charging a rechargeable battery during a powered locking stroke of the actuator, and during a subsequent powered stall of the actuator.

5. The method defined in claim 1, wherein the mechanical energy storage means and the electrical energy storage means are fully redundant.

6. The method defined in claim 1, wherein controlling the linear velocity of the actuator comprises:

sensing a rotational speed of an actuator motor;

sensing a first current supplied to the motor;

reducing the first current if the rotational speed is higher than a maximum speed, or if the first current is higher than a maximum current.

7. The method defined in claim 6, wherein controlling the linear velocity of the actuator further comprises:

shunting a second current generated by the motor into a damper circuit to place an electrical load on the motor if the first current is substantially zero and the rotational speed is higher than the maximum speed.

8. The method defined in claim 6, wherein sensing the rotational speed of the motor comprises measuring a frequency of a Hall effect sensor signal.

9. The method defined in claim 6, wherein sensing the rotational speed of the motor comprises measuring a back electro-motive force generated by the motor.

10. The method defined in claim 6, wherein reducing the first current comprises reducing a voltage supplied to the motor.

11. The method defined in claim 6, wherein reducing the first current comprises pulse-width-modulating a power signal supplied to the motor.

12. A system for providing improved reliability in an aircraft door flight lock actuator comprising apparatus for:

storing energy in a mechanical energy storage means and an electrical energy storage means;

powering the actuator using the energy stored in the mechanical energy storage means and the electrical energy storage means to complete an unlocking stroke in the absence of aircraft power; and

controlling a linear velocity of the actuator.

13. The system defined in claim 12, wherein the apparatus for storing energy in the mechanical energy storage means comprises apparatus for deforming a compression coil spring during a powered locking stroke of the actuator.

14. The system defined in claim 12, wherein the apparatus for storing energy in the electrical energy storage means comprises apparatus for charging at least one capacitor during a powered locking stroke of the actuator, and during a subsequent powered stall of the actuator.

15. The system defined in claim 12, wherein the apparatus for storing energy in the electrical energy storage means comprises apparatus for charging a rechargeable battery during a powered locking stroke of

the actuator, and during a subsequent powered stall of the actuator.

16. The system defined in claim 12, wherein the apparatus for storing energy in the mechanical energy storage means and the electrical energy storage means are fully redundant.

17. The system defined in claim 12, wherein the apparatus for controlling the linear velocity of the actuator comprises apparatus for:

sensing a rotational speed of an actuator motor;

sensing a first current supplied to the motor;

reducing the first current if the rotational speed is higher than a maximum speed, or if the first current is higher than a maximum current.

18. The system defined in claim 17, wherein the apparatus for controlling the linear velocity of the actuator further comprises apparatus for:

shunting a second current generated by the motor into a damper circuit to place an electrical load on the motor if the first current is substantially zero and the rotational speed is higher than the maximum speed.

19. The system defined in claim 17, wherein the apparatus for sensing the rotational speed of the motor comprises apparatus for measuring a frequency of a Hall effect sensor signal.

20. The system defined in claim 17, wherein the apparatus for sensing the rotational speed of the motor comprises apparatus for measuring a back electromotive force generated by the motor.

21. The system defined in claim 17, wherein the apparatus for reducing the first current comprises apparatus for reducing a voltage supplied to the motor.

22. The system defined in claim 17, wherein the apparatus for reducing the first current comprises apparatus for pulse-width-modulating a power signal supplied to the motor.